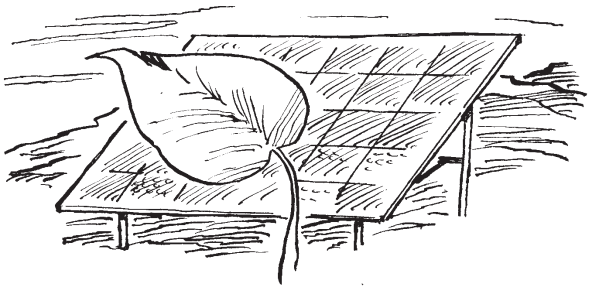
Green Power



EPA's State and Local Climate Change Program helps build awareness, expertise, and capacity to address the risk of climate change at the state and local levels. The program provides guidance and technical information to help state and local agencies prepare inventories of greenhouse gas emissions, develop action plans to reduce emissions, and educate their constituents. By emphasizing the many economic and environmental benefits of greenhouse gas reductions, the program encourages state and local decisionmakers to implement voluntary measures to reduce their greenhouse gas emissions.

Green Power for States and Municipalities

Local and state governments can use "green power"—electricity produced from renewable energy sources such as solar, wind, geothermal, hydro, and biomass—to reduce greenhouse gas emissions and air pollution from energy use in their offices and facilities. By purchasing or generating green power, governments can lead the way toward wider support of clean energy sources.

In states that have created a competitive market for electricity, state and local agencies may buy green power from utilities and other electricity providers. In California, for example, 38 city governments, school districts, and other public agencies in the San Diego Association of Governments currently purchase green power for their electricity needs.

In states with traditional regulated electricity structures, governments may participate in green pricing programs if they are offered by utilities. A green pricing program is a voluntary utility-sponsored program that allows customers to support the development of renewable resources. Participating customers may pay a premium on their electric bill to cover the incremental cost of the renewable energy.

When customers purchase green electricity, they ensure that the power provider will add that amount of renewable power into the grid, offsetting the need for the same amount of conventional power. The power provider may do this by maintaining existing renewable resources, or by purchasing or constructing additional renewable-generated electricity. The electricity that flows into the building of a green power or green pricing customer is no different from the electricity received by other customers on the grid.

Although green energy often comes at a premium price, some electricity providers offer "packaged" products that include services to improve energy efficiency. These services can keep customers' monthly electricity bills from increasing despite the higher fee per kilowatt-hour for green power. For example, the Los Angeles Department of Water and Power provides all of its green power customers with two energy-efficient light bulbs and a menu of energy efficiency services.

In an effort to provide consumers with valid information about green power claims, environmentalists, consumer advocates, and industry representatives have developed the Green-e program for independent certification of green power products. Green-e certification is available only for electricity sold in competitive markets. Currently 15 products in California and 5 in Pennsylvania have received Green-e certification. Products must meet minimum environmental standards for renewable content and air emissions. In addition, companies must undergo an independent audit to verify that they have purchased enough renewable power to meet their

BENEFITS OF PURCHASING GREEN POWER

- Promotes development of new renewable energy resources.
- Creates jobs in renewable energy industry.
- Reduces emissions of greenhouse gases and air pollution.

product claims. Government agencies may use Green-e as a base standard for considering bids from competing power providers.

The Federal Role

On June 3, 1999, the President released an executive order on "Greening the Government Through Efficient Energy Management." Among other things, the order requires all federal agencies to strive to expand their use of renewable energy "by implementing renewable energy projects and by purchasing electricity from renewable energy sources." The executive order requires all federal agencies to reduce their greenhouse gas emissions from energy use by 30 percent by 2010 compared with 1990 levels.

On the day after the executive order was released, the U.S. Environmental Protection Agency became the first federal agency to purchase 100 percent green power for one of its facilities. An EPA laboratory in Richmond, California, will purchase 100 percent renewable electricity under a three-year agreement between the General Services Administration and the Sacramento Municipal Utility District (SMUD). Under the agreement, SMUD will sell EPA 1.8 million kilowatt-hours of electricity per year.

By purchasing green electricity, the EPA facility will reduce greenhouse gas emissions by more than 2.3 million pounds per year, a reduction equivalent to eliminating more than two million passenger car miles annually.

State Experience with Purchasing Green Power

The governors of Colorado and Nebraska recently issued executive orders to encourage state agencies to buy renewable-generated electricity. Five Nebraska state agencies and the governors mansions in Colorado and Nebraska now purchase wind-generated electricity from local utilities. In general, however, municipalities have been more active in purchasing green power than state governments have.

California

California has restructured its electricity industry, and 9 of the 11 electricity providers in California's competitive market currently offer green power products.

A number of cities in California purchase green power for municipal operations. In October 1998, the Santa Monica City Council directed city staff to sign a one-year contract to purchase 5 megawatts of geothermal power, enough to meet all of Santa Monica's municipal electricity needs at peak load. The city will pay a 5 percent premium—about $140,000 more annually—for the green power. In addition to its municipal purchases, Santa Monica plans to initiate a public education campaign to encourage residents and businesses to become more energy efficient and to switch to a green power provider. The city estimates that its green power purchases will reduce its annual carbon dioxide (CO_2) emissions by 13,672 tons, nitrogen oxides (NOx) by 16.2 tons, sulfur dioxide (SO_2) by 14.57 tons, and particulates by 2,285 pounds, based on Southern California Edison's current electricity supply mix.

The City of Chula Vista voted in June 1999 to purchase green power for most of its electricity needs, joining 10 other cities and 27 public agencies in the San Diego Association of Governments that have switched to green power.

The municipal utilities of Los Angeles, Alameda, and Sacramento offer green pricing options for their customers. The Green Power for a Green L.A. program gives Los Angeles customers the option to receive 100 percent renewable energy at an additional cost of $3 per month for the average residential customer. The Los Angeles Department of Water and Power will supply 20 percent of the power from new renewable sources.

Texas

Austin Energy, the municipal utility for the City of Austin, has launched an initiative to make renewables account for at least 5 percent of its generation mix by the end of 2004. The utility plans to spend at least $1 million per year to purchase up to 100 megawatts of renewable-generated power. In addition, Austin Energy will offer a voluntary green pricing program to its customers. The utility will match funds collected from participants dollar-for-dollar to purchase additional green power beyond its 100-megawatt commitment.

Austin Energy also has constructed three solar power facilities under its Solar Explorer program, supported in part by nearly 1,000 Austin residents, businesses, and organizations. Austin plans to meet 50 percent of its new electricity demand with renewable energy by 2010. According to the International Council for Local Environmental Initiatives, Austin's goal would result in a CO_2 reduction of approximately 1.9 million tons per year compared with the utility's current emissions from electricity production.

For More Information

The U.S. Environmental Protection Agency's *Green Power Site* includes a calculator for estimating the environmental benefits of buying green power in specific states.

Website: *http://www.epa.gov/globalwarming/actions/solar and click on "Green Power."*

The U.S. Department of Energy's frequently updated *Green Power Network* website provides news and information on green power markets, including a reference library.

Website: *http://www.eren.doe.gov/greenpower/*

The *Environmental Resources Trust* is a nonprofit organization that brokers electric power sources offering "clear and demonstrable environmental benefits."

Website: *http://www.utilityguide.com/1common/gpower.html*

The *Green-e Renewable Electricity Certification Program* helps the public understand how to purchase verified green power from credible companies.

Website: *http://www.green-e.org/*

EPA's *State and Local Climate Change Program* helps states and communities reduce emissions of greenhouse gases in a cost-effective manner while they address other environmental problems.

Website: *http://www.epa.gov/globalwarming/ and click on "Public Decision Makers" under the "Visitors Center."*